PATENT DRAWING

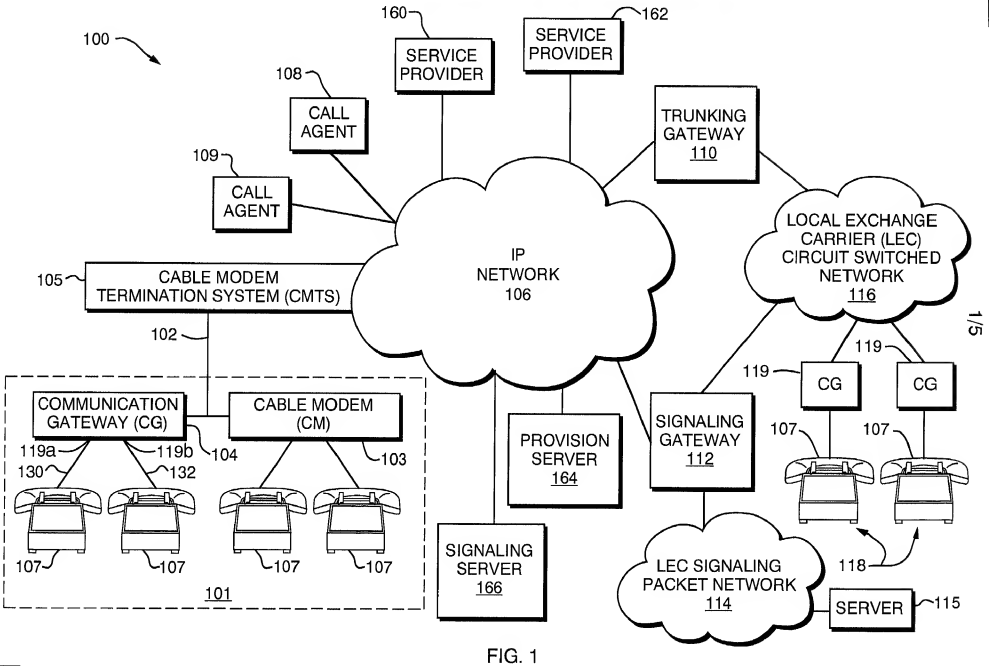

FIG. 1

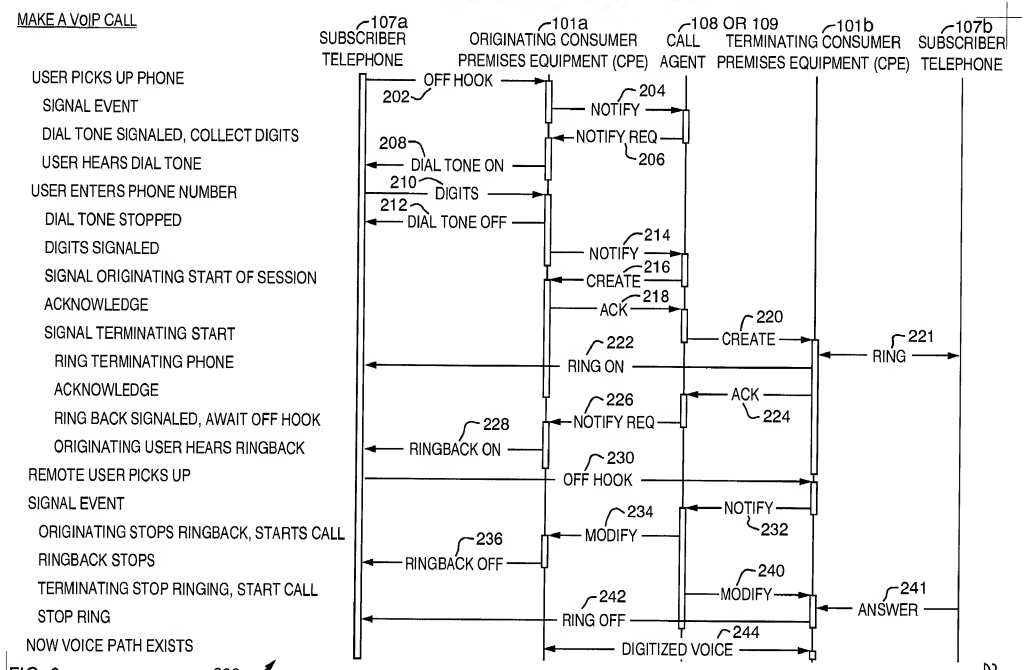
MAKE A VoIP CALL
USER PICKS UP PHONE
SIGNAL EVENT
DIAL TONE SIGNALED, COLLECT DIGITS
USER HEARS DIAL TONE
USER ENTERS PHONE NUMBER
DIAL TONE STOPPED
DIGITS SIGNALED
SIGNAL ORIGINATING START OF SESSION
ACKNOWLEDGE
SIGNAL TERMINATING START
RING TERMINATING PHONE
ACKNOWLEDGE
RING BACK SIGNALED, AWAIT OFF HOOK
ORIGINATING USER HEARS RINGBACK
REMOTE USER PICKS UP
SIGNAL EVENT
ORIGINATING STOPS RINGBACK, STARTS CALL
RINGBACK STOPS
TERMINATING STOP RINGING, START CALL
STOP RING
NOW VOICE PATH EXISTS
107a SUBSCRIBER TELEPHONE
101a ORIGINATING CONSUMER PREMISES EQUIPMENT (CPE)
108 OR 109 CALL AGENT
101b TERMINATING CONSUMER PREMISES EQUIPMENT (CPE)
107b SUBSCRIBER TELEPHONE
OFF HOOK
202
NOTIFY
204
NOTIFY REQ
206
208
DIAL TONE ON
210
DIGITS
212
DIAL TONE OFF
NOTIFY
214
CREATE
216
ACK
218
CREATE
220
RING
221
RING ON
222
ACK
224
NOTIFY REQ
226
228
RINGBACK ON
OFF HOOK
230
NOTIFY
232
MODIFY
234
236
RINGBACK OFF
MODIFY
240
ANSWER
241
RING OFF
242
DIGITIZED VOICE
244

FIG. 2 200

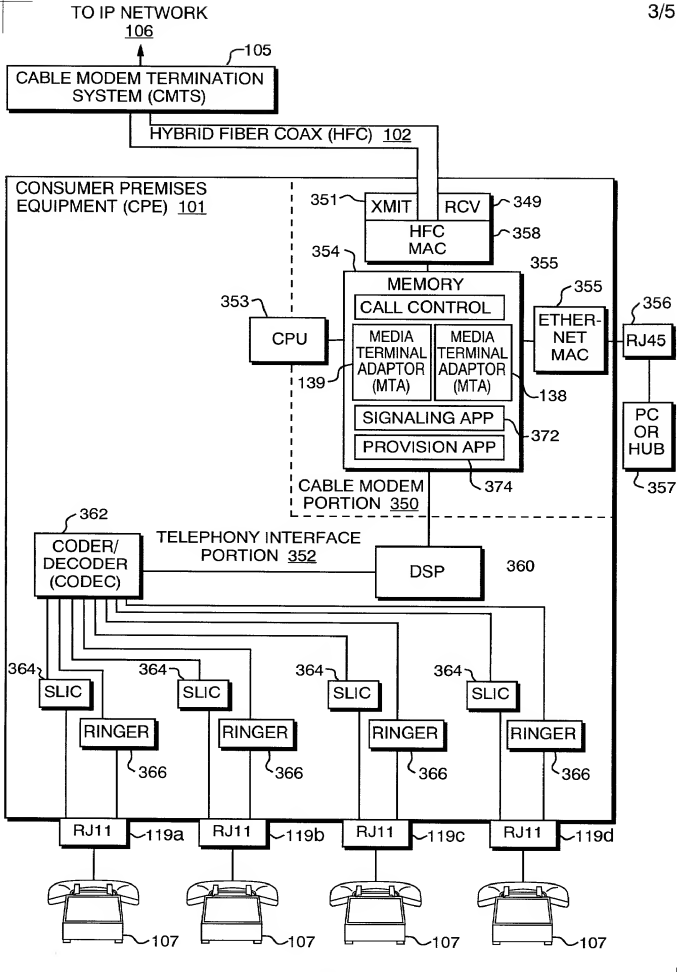
TO IP NETWORK
106
105
CABLE MODEM TERMINATION SYSTEM (CMTS)
HYBRID FIBER COAX (HFC) 102
CONSUMER PREMISES EQUIPMENT (CPE) 101
351
XMIT
RCV
349
HFC MAC
358
354
355
MEMORY
CALL CONTROL
353
CPU
MEDIA TERMINAL ADAPTOR (MTA)
MEDIA TERMINAL ADAPTOR (MTA)
139
138
SIGNALING APP
372
PROVISION APP
374
355
ETHER-NET MAC
356
RJ45
PC OR HUB
357
CABLE MODEM PORTION 350
362
CODER/ DECODER (CODEC)
TELEPHONY INTERFACE PORTION 352
DSP
360
364
SLIC
RINGER
366
RJ11
119a
119b
119c
119d
107

FIG. 3

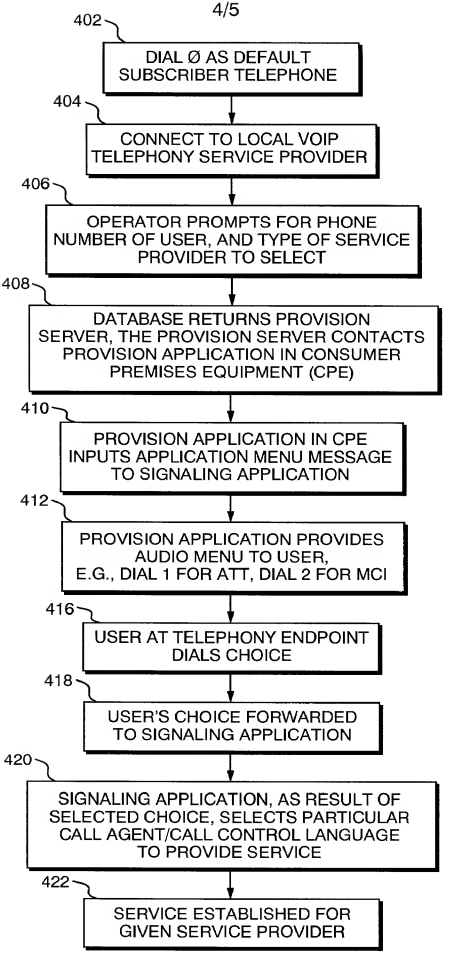
402
DIAL Ø AS DEFAULT SUBSCRIBER TELEPHONE
404
CONNECT TO LOCAL VOIP TELEPHONY SERVICE PROVIDER
406
OPERATOR PROMPTS FOR PHONE NUMBER OF USER, AND TYPE OF SERVICE PROVIDER TO SELECT
408
DATABASE RETURNS PROVISION SERVER, THE PROVISION SERVER CONTACTS PROVISION APPLICATION IN CONSUMER PREMISES EQUIPMENT (CPE)
410
PROVISION APPLICATION IN CPE INPUTS APPLICATION MENU MESSAGE TO SIGNALING APPLICATION
412
PROVISION APPLICATION PROVIDES AUDIO MENU TO USER, E.G., DIAL 1 FOR ATT, DIAL 2 FOR MCI
416
USER AT TELEPHONY ENDPOINT DIALS CHOICE
418
USER'S CHOICE FORWARDED TO SIGNALING APPLICATION
420
SIGNALING APPLICATION, AS RESULT OF SELECTED CHOICE, SELECTS PARTICULAR CALL AGENT/CALL CONTROL LANGUAGE TO PROVIDE SERVICE
422
SERVICE ESTABLISHED FOR GIVEN SERVICE PROVIDER

FIG. 4

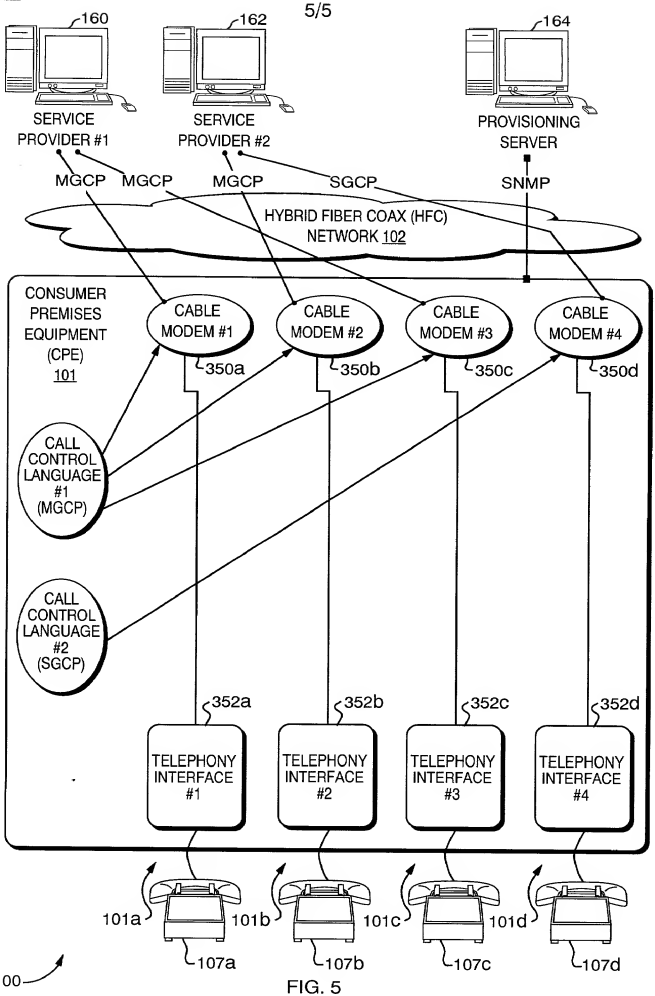
160
162
164
SERVICE PROVIDER #1
SERVICE PROVIDER #2
PROVISIONING SERVER
MGCP
MGCP
MGCP
SGCP
SNMP
HYBRID FIBER COAX (HFC) NETWORK 102
CONSUMER PREMISES EQUIPMENT (CPE) 101
CABLE MODEM #1
CABLE MODEM #2
CABLE MODEM #3
CABLE MODEM #4
350a
350b
350c
350d
CALL CONTROL LANGUAGE #1 (MGCP)
CALL CONTROL LANGUAGE #2 (SGCP)
352a
352b
352c
352d
TELEPHONY INTERFACE #1
TELEPHONY INTERFACE #2
TELEPHONY INTERFACE #3
TELEPHONY INTERFACE #4
101a
101b
101c
101d
107a
107b
107c
107d
100

FIG. 5